



Aquaro 1-1-36-86

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

**Patent Application**

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Applicant(s): Aquaro et al.  
Docket No.: 1-1-36-86  
Serial No.: 09/516,274  
Filing Date: February 29, 2000  
10 Group: 2828  
Examiner: Tuan N. Nguyen

I hereby certify that this paper is being deposited on this date with the U.S. Postal Service as first class mail addressed to the Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450

Signature: [Signature] Date: August 31, 2004

Title: Method and Apparatus for Coupling a Multimode Laser to a Multimode Fiber

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**SUPPLEMENTAL APPEAL BRIEF**

Mail Stop Appeal Brief – Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

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Sir:

Appellants hereby reply to the non-final Office Action, mailed June 17, 2004. A request to reinstate the appeal is submitted herewith. Appellants' Appeal Brief in an Appeal of the  
25 final rejection of claims 1 through 16 in the above-identified patent application was submitted on October 22, 2003 and a Supplemental Appeal Brief was submitted on April 21, 2004.

**REAL PARTY IN INTEREST**

A statement identifying the real party in interest is contained in Appellants' Appeal  
30 Brief.

RELATED APPEALS AND INTERFERENCES

There are no related appeals or interferences that will directly affect or be directly affected by or have a bearing on the decision in the present appeal.

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STATUS OF CLAIMS

Claims 1 through 16 are pending in the above-identified patent application. A statement identifying the original status of the claims is contained in Appellants' Appeal Brief and Supplemental Appeal Brief. Claims 1-16 are now rejected under 35 U.S.C. §102(b) as being unpatentable over Scifres et al. (United States Patent No. 4,818,062).

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STATUS OF AMENDMENTS

A statement identifying the status of the amendments is contained in Appellants' Appeal Brief.

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SUMMARY OF INVENTION

A Summary of the Invention is contained in Appellants' Appeal Brief.

ISSUES PRESENTED FOR REVIEW

20 A statement identifying the issues originally presented for review is contained in Appellants' Appeal Brief. In the present Office Action, the Examiner has withdrawn the previous rejections and added a new rejection of claims 1-16 under 35 U.S.C. §102(b) as being unpatentable over Scifres et al.

GROUPING OF CLAIMS

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A statement identifying the grouping of the claims is contained in Appellants' Appeal Brief.

CLAIMS APPEALED

A copy of the appealed claims is contained in an Appendix of Appellants' Appeal Brief.

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ARGUMENT

Independent Claims 1, 8, 15 and 16

Independent claims 1, 8, 15, and 16 were rejected under 35 U.S.C. §102(b) as being unpatentable over Scifres et al. In particular, the Examiner asserts that Scifres discloses in Figures 1-4, 8, and 11, a multimode tapered structure (Fig. 2: 17) for coupling a multimode laser (Fig. 2: 11, 45; Fig. 2: 53; Fig. 4: 27, 33) to a multimode fiber. The Examiner further asserts that Scifres clearly anticipates the claim by showing an elliptical input and circular output and that, given the identical structure found in Scifres, the intended application is clearly within its design.

Appellants note that the Examiner is presenting the same rejection of the independent claims as was presented in the final Office Action dated June 17, 2003. In response to that final Office Action, Appellants submitted an Appeal Brief on October 22, 2003. The Examiner then vacated the Office Action and presented a new rejection of claims 1-16 under 35 U.S.C. §103(a) as being unpatentable over Payne (United States Patent No. 5,305,413) in view of Scifres et al. In response to a Supplemental Appeal Brief submitted by Appellants on April 21, 2004, the Examiner has once again vacated the Office Action and *re-presented* the same rejection of the independent claims as was presented in the final Office Action.

Appellants again note that Scifres is directed to fiber optic waveguides wherein the "input end of the fiber optic waveguides may be squashed into an elongated cross section." See, Abstract. Scifres teaches that the light from a laser is then directed to the fiber optic waveguide *without an intervening structure*. The independent claims of the present invention, alternatively, are directed to a "multimode tapered structure" that couples a "multimode laser to a multimode fiber." As set forth in each of the independent claims, the multimode tapered structure must have an "input end having an elliptical cross section for coupling with said multimode laser" and an "output end having a circular cross section for coupling with said multimode fiber." The structure described in

Scifres does not have an output end that couples with a fiber, since the structure is a squashed fiber itself!

With the multimode tapered structure of the present invention, the light passes from the laser through the claimed tapered structure to the fiber optic cable. The multimode tapered structure *does not have the same optical characteristics* as a fiber optic waveguide that has been squashed. In addition, the fiber optic waveguide of Scifres does not have an “output end having a circular cross section *for coupling with said multimode fiber*,” as required by independent claims 1, 8, 15, and 16.

Conclusion

The rejections of the claims under section §102 in view of Scifres et al. are therefore believed to be improper and should be withdrawn. The remaining rejected dependent claims are believed allowable for at least the reasons identified above with respect to the independent claims.

The attention of the Examiner and the Appeal Board to this matter is appreciated.

Respectfully submitted,



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